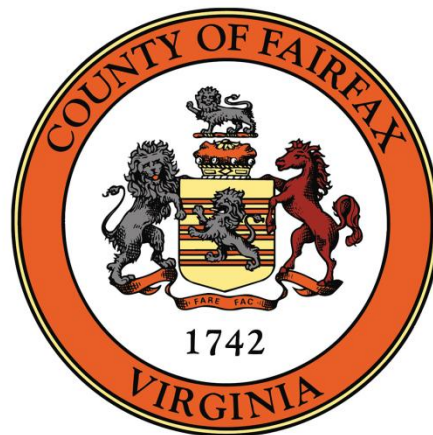# Digital Map Viewer

Help Guide

Table of Contents

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What is the Digital Map Viewer?

The *Digital Map Viewer* is an online mapping application that aids users in viewing and downloading pages from official Fairfax County map books. Multiple types of map book pages are available, some with many years available (the property map book series goes back annually to 1960).

Maps may be found for a location by selecting the county tax map grid, entering an address, or clicking on the interactive map tab.

Maps are downloaded in an Adobe PDF format and may be viewed online or downloaded for offline viewing. Using the Adobe Reader plugin, users can zoom, pan, turn map layers on and off, and print the map book pages.

What is new in the Digital Map Viewer?

The *Digital Map Viewer* contains many enhancements that make finding and viewing Fairfax County map book pages both easier and more efficient. Some highlights include:

1. **Search by Address:** While the previous method of searching for maps by tax map grid tiles is preserved, you are now able to find maps based on addresses. Simply type the desired address into the search box, and the address point will appear on the overview map with a button to see all map types and years available for the specific address.
2. **Open Maps in Tabs or New Windows**: No more being forced to view a map book page in a small window; you now have the ability to see them in a separate application tab or in a new browser window. This also prevents users having to close a previous map to retrieve a new one.
3. **New Overview Map**: If you don't know an address, explore and find locations on the overview map. See the locations of searched addresses. Toggle tax map grids and parcels on and off as needed.
4. **Select Map Tile by Click**: When this tool is enabled, automatically populate the search parameters for the location clicked on the overview map—no address or map tile needed.
5. **Save Previous Searches**: Map lists for previous searches are saved and easily reviewed.

## What system requirements are needed to use the Digital Map Viewer?

All that is needed is an internet connection, a web browser, and the Adobe Acrobat Reader plugin.

- **Internet connection**: Some maps available from download can be quite large. The faster the internet connection speed, the less users will be forced to wait before viewing a map.
- **Web browser**: Most major web browsers will work with the *Digital Map Viewer.* Firefox (3.5 or higher), Google Chrome (4 or higher), Internet Explorer (7 or higher), and Safari (3 or higher) all should work.
- **Adobe Acrobat Reader plugin:** The Adobe Acrobat Reader plugin (version 10 or later) for browsers is required to view the PDF formatted maps available in the *Digital Map Viewer.* Please follow the links below from Adobe for further information:
  - o **Adobe Acrobat Reader 10 - Home**
  - o **Adobe Acrobat Reader 10 - System Requirements**
  - o **Adobe Acrobat Reader 10 - Download**
 - o **Adobe Acrobat Reader 10 - Help and Support**

How do I interact with the PDF maps?

The Adobe Acrobat Reader plugin that reads the PDF maps provides tools to zoom, pan, and control which map layers are shown. For details on this functionality, the Adobe Acrobat Reader help files should be consulted. Below, however, are some very basic tips for the Microsoft Windows version of Adobe Acrobat Reader.

- **Zooming:** Right-click the map to bring up the context menu. Select the "Marquee Zoom" tool. Click and drag a box over the desired area to zoom in.
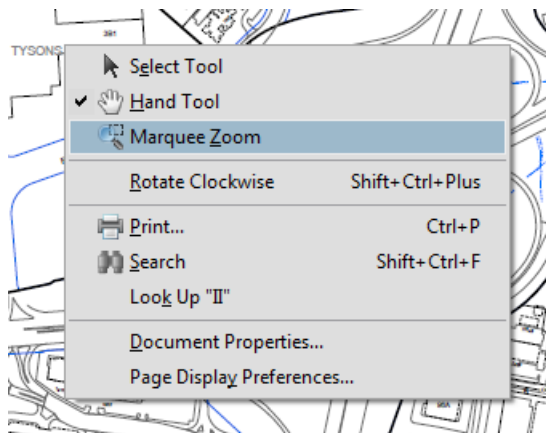
After zooming in, right-clicking on the map displays additional navigation options. The "Previous View" and "Next View" options allow navigating to previous extents.
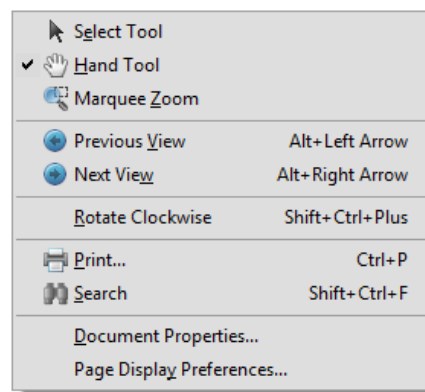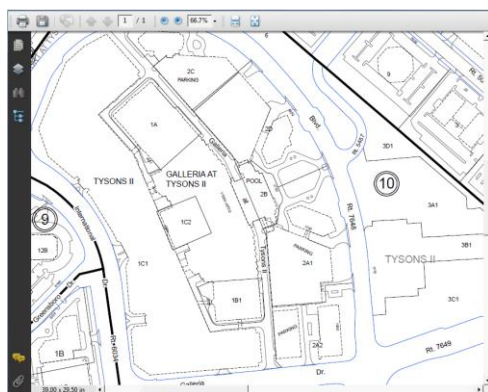
- **Panning:** Right-click the map to bring up the context menu. Select the "Hand Tool." Click and drag the hand icon to move to other places in the map. The "Hand Tool" will not provide any functionality if zoomed out to the full extent of the map; panning is active only when zoomed in.
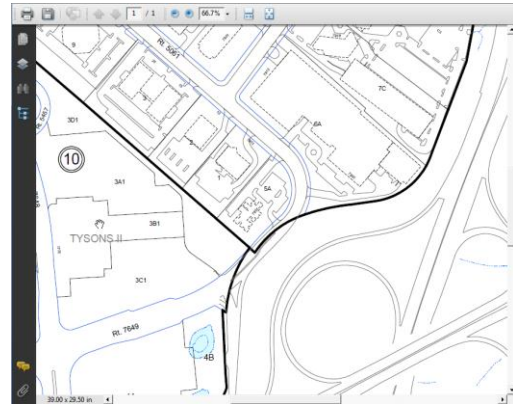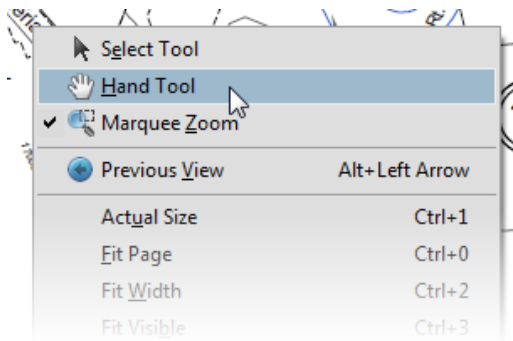
### *What is the View Map tab and how do I interact with it?*

The "View Map" tab (between the "Find Maps" panel and the "Help" tab) provides an interactive mapping environment to explore Fairfax County. It provides users an environment to find desired digital map book pages by displaying address search results and providing the map environment for the "Select Map Tile by Click" tool.

Map Layers: The default display for "View Map" tab is the DC Metro area with the Fairfax County boundary and Fairfax County tax map grid (each grid tile represents a page in the digital map books). As the map is zoomed in, individual map tile labels appear and the parcel boundaries are displayed. These layers may be turned off/on by following the steps below:
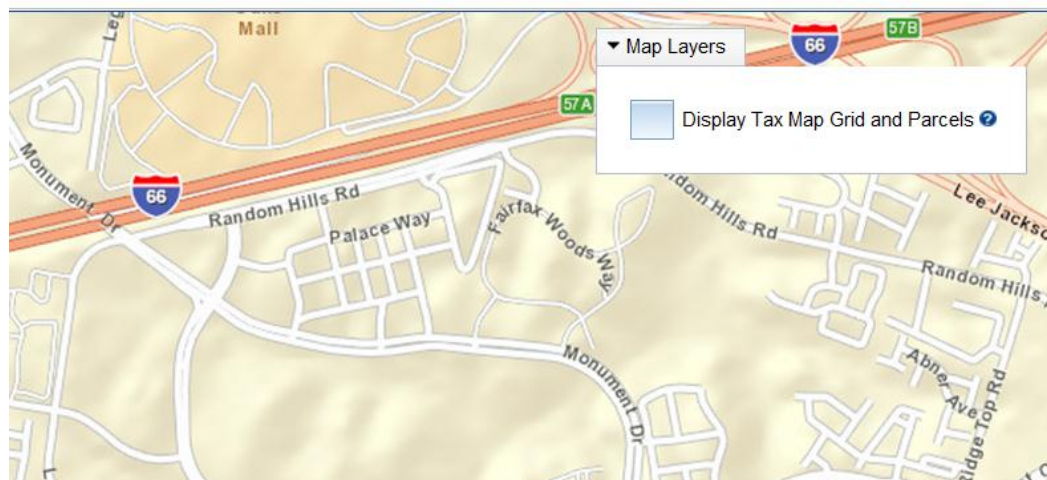
1. Click the floating "Map Layers" box on the upper right corner of the "View Map" tab.

2. Uncheck the box next to the "Display Tax Map Grid and Parcels" text.
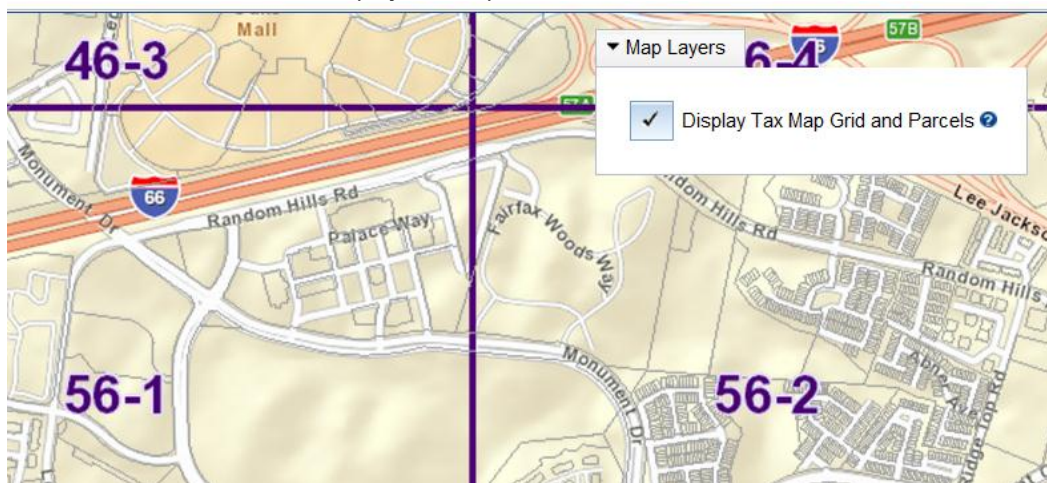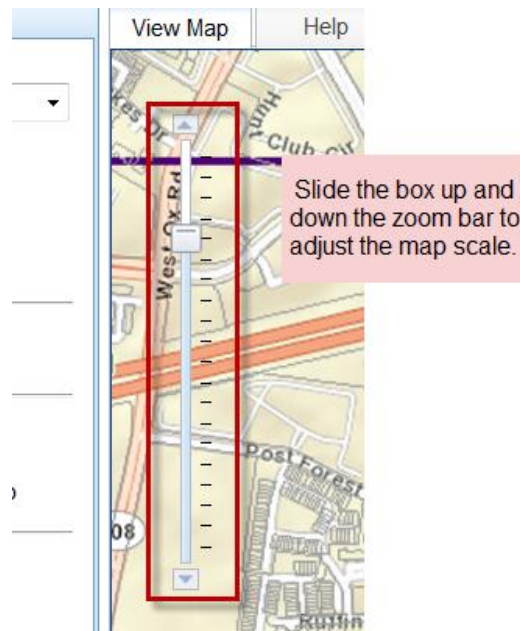

3. The layers will be turned off. To display the layers again, click the unchecked box.

Navigating the Map: There are several ways to interact with the "View Map" tab with panning and zooming.

1. **Zoom Bar**: Using the zoom bar on the left hand side of the map to set your zoom level. The higher the setting on the bar, the more zoomed in the view.

2. **Using the Mouse:** A variety of panning and zooming tasks may be performed using the mouse.

- **Panning:**
    - **Drag** to pan
    - Use **Arrow keys** to pan
- **Centering:**
    - **SHIFT + Click** to center map on the location clicked.
- **Zooming:**
    - **SHIFT + Drag** to zoom in
    - **SHIFT + CTRL + Drag** to zoom out
    - **Mouse Scroll Forward** to zoom in
    - **Mouse Scroll Backward** to zoom out
    - **+ key (numeric keypad)** to zoom in a level
    - **- key (numeric keypad)** to zoom out a level
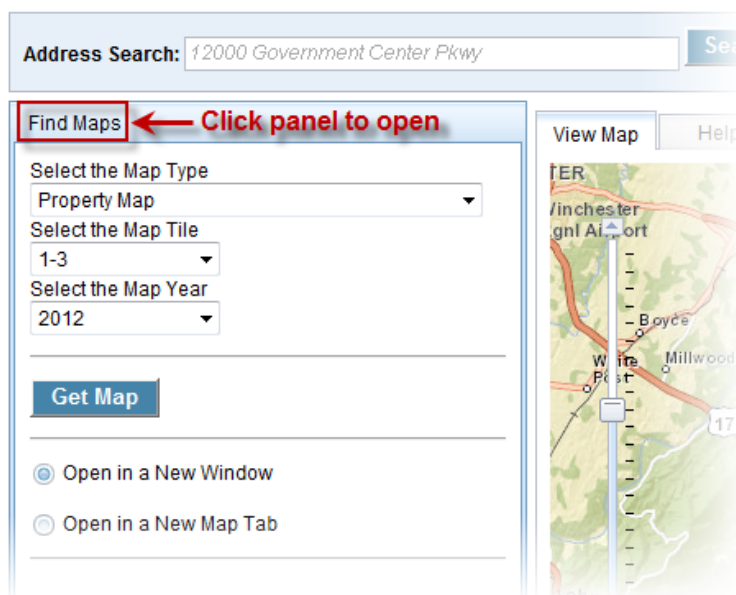   - **Double Click** to zoom in to click location

How do I find maps?

Maps in the *Digital Map Viewer* all correspond to the Fairfax County Tax Map Grid (a map of the grid may be displayed in the "View Map" tab). Every grid tile, 444 in total, corresponds to a discrete map from Fairfax map books (for an explanation of the map types available, please see the Map Types Description section below).
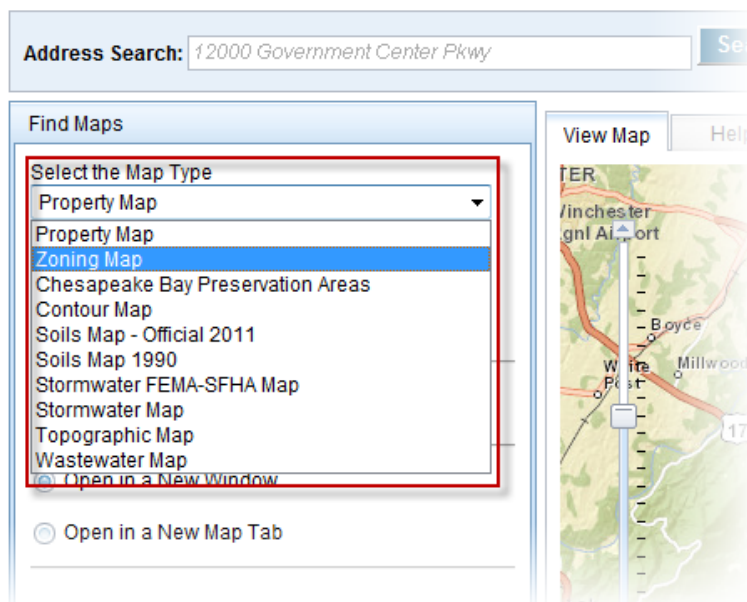
There are two three methods for finding maps: *Manual Selection, Search by Address,* and *Select Map Tile by Click*.

Manual Selection: The *Digital Map Viewer* has retained its previous version's method of selecting maps. The following steps need to be followed:
1. Click the "Find Maps" panel on the left side of the application

2. Choose the desired map book category from the "Select the Map Type" drop down list.

3. Select the map tile that for the map. Only one map tile can be chosen at a time.

4. Select the map year. The most recent map year is always the default. Different map types have different years of availability, however the map year will only populate with the available map years for the selected map type.

5. Click the "Get Map Button". The desired map will be displayed either in a new web browser window or a new map tab according to which radio button is selected.
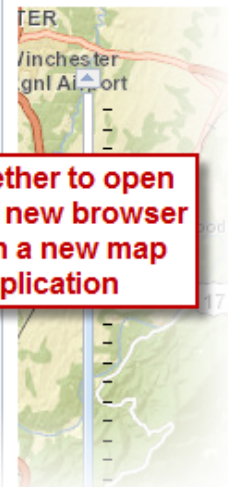
Map opens in a new browser window

Map opens in a new map tab in the application
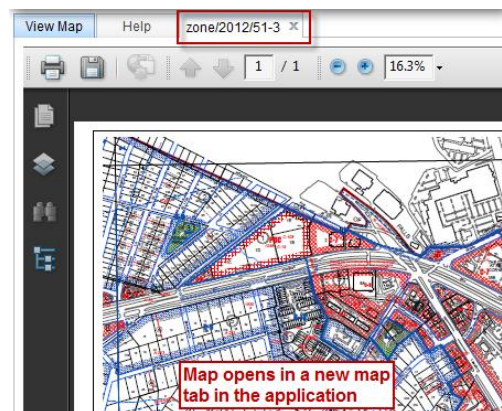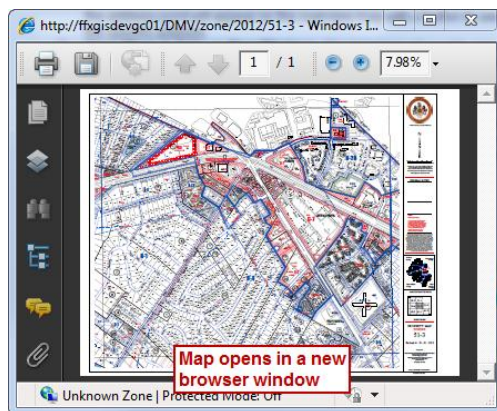
Select by Address: The *Digital Map Viewer* now has the ability to find maps for an address. Instead of having to independently find the map tile grid number for an area, users may now find maps for an address location in Fairfax County. Simply type an address, confirm its location in the View Map tab, and click a button to view a list of all the maps available for the address location.

1. Type an address into the "Address Search" box. The address should include a street number, street name, and street type such as "12000 Government Center Parkway".
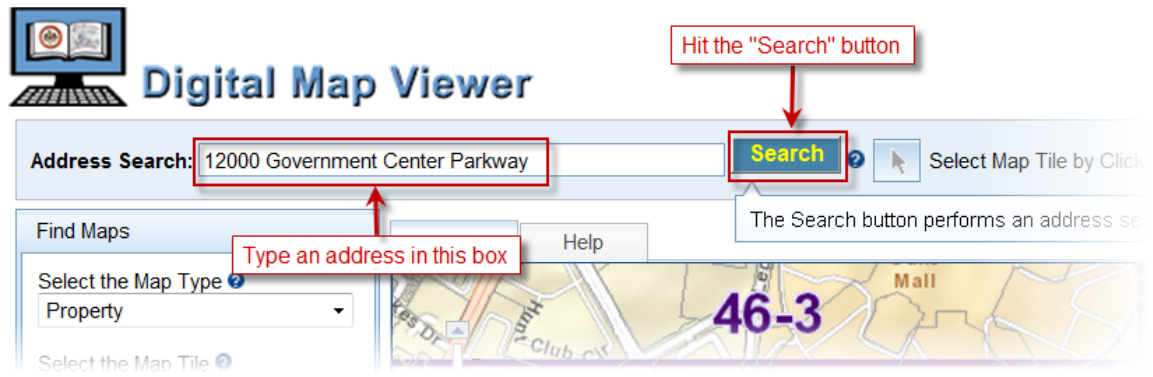
2. If the address was not found, you will be prompted either to try again or view a list of suggested addresses.
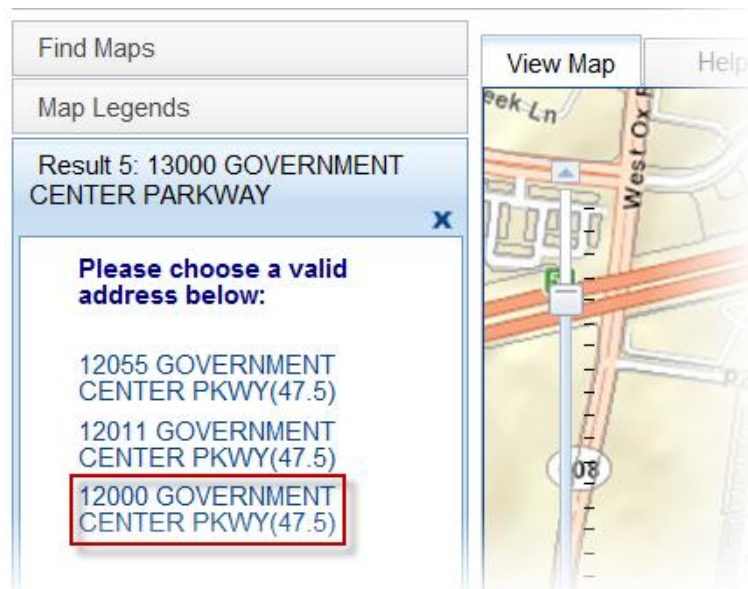
3. Once your address is found, it will be shown in the "View Map" tab with a message box containing the full mailing address and a "Get Map List" button. The "Get Map List" button is also available under the "Find Maps" panel.
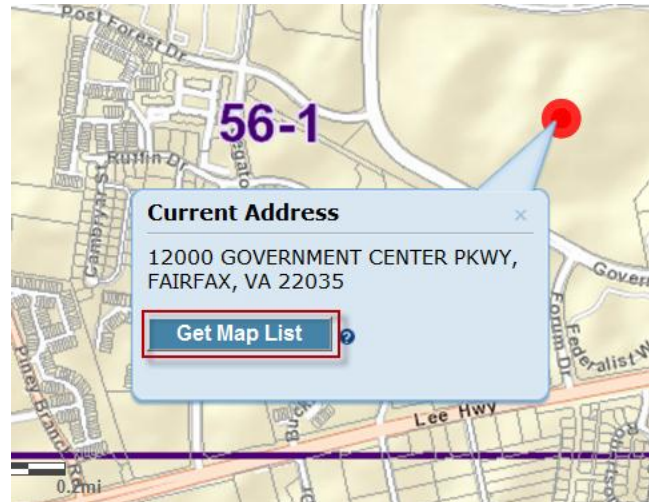
4. Clicking the "Get Map List" button will open a new panel under "Map Legends". All of the available years for each map type of the input address location are listed and can be clicked to view the maps. The selected map will open in a new window or a new map tab depending on which option is selected in the Find Maps panel.

5. Address search results are displayed on the "View Map" tab and saved as panels until they are deleted. Map lists for previous results may be revisited by clicking the address. Once clicked, the address will be zoomed to in the "Map View" tab.

Select Map Tile by Click: When navigating in the "Map View" tab, the "Select Map Tile by Click" tool allows users to generate a map list for any point on the map in Fairfax County.

1. Navigate in the "View Map" tab to a general area of interest.

2. Check the box next to the "Select Map Tile by Click" next the address search area.
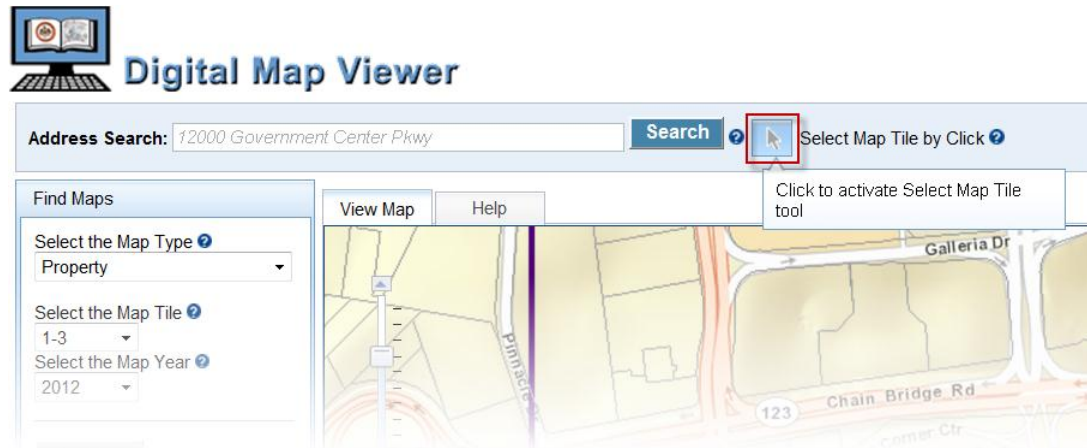
3. With this tool now activated, click on a location that you wish to generate a map list for.

4. Under the "Find Maps" panel, the map tile dropdown selection will be set for the map tile you clicked. Additionally, there will be a "Get Map List" button for this location.
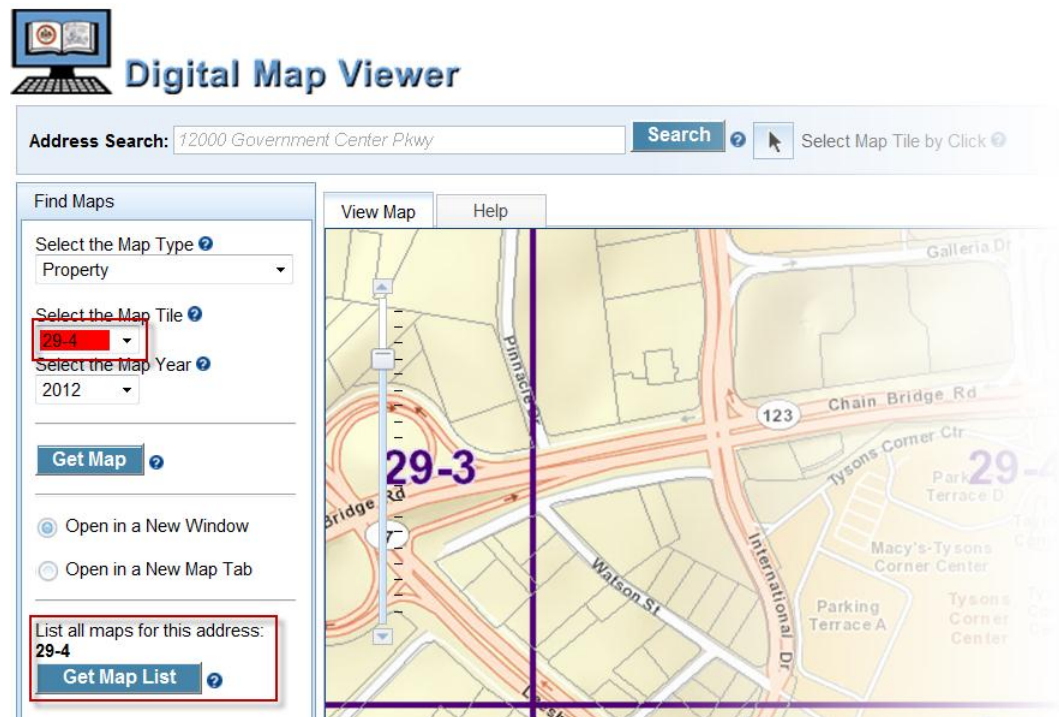
5. Use the map list to retrieve map book pages as described in the address search section.

What are Fairfax County digital map books?

The *Digital Map Viewer* is designed to easily retrieve map pages from a variety of Fairfax County digital map books. Multiple types of map books are available (listed below), some with many years available (the property map book series goes back annually to 1960). The map books are divided into pages based on the 444 map tiles of the Fairfax County tax map grid so that each page represents a single map tile. The map grid may be seen in its entirety in the "View Map" tab.

When are Fairfax County digital map books updated?

Maps are updated at different times (see map descriptions for details), but each individual map page has a "Revised to Date" that represents when the data was current. When viewing a map after the "Revised to Date," the data may or may have not changed since.
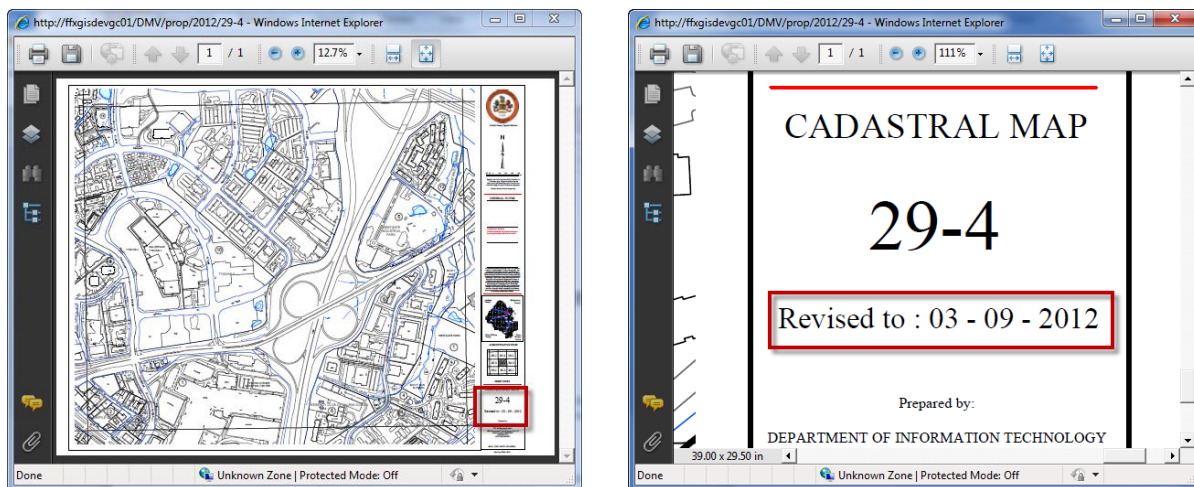
What are the different types of Fairfax County Map Books?

Below are detailed descriptions of the different map types available for download from the *Digital Map Viewer.*

• Property • Zoning • Chesapeake Bay Preservation Areas	• Contour • Soils – Official 2011 • Soils 1990 • Stormwater FEMA-SFHA	• Stormwater • Topographic • Wastewater

Detailed legends for each of map type can be found in the "Map Legends" section below the "Find Maps" panel.
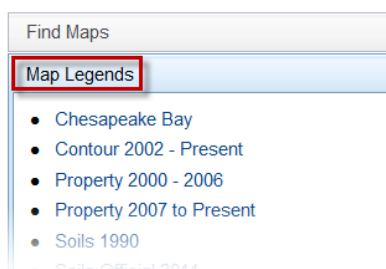
Property Maps

Property maps include:

- **Boundaries:** State, County or Corporate, Subdivision, Block Division, Property
- **Legal Rights of Way:** State or Interstate Highway, Railroad, Public Street, Private Street, Outlet Road, Unconstructed Right-of-way, Parking or Pavement limits
- **Legal Rights of Way:** State or Interstate Highway, Railroad, Public Street, Private Street, Outlet Road, Unconstructed Right-of-way, Parking or Pavement limits
- **Easements:** Approved Flood Plain, Recorded Flood Plain, Storm Drainage, Conservation, Ingress-Egress, Major Public Utility
- **Drainage:** Streams, Creeks, Rivers, Ponds, Lake Banks, Concrete/Steel Dams, Earthen Dams
- **Districts**: Agricultural and Forestal District, Special Tax District
- **Unique Identifiers:** Acreage or Subdivision (Double circle and number), Block designation (Single circle and number), Parcel or Lot number (Uncircled number)
- **Features and Symbols:** Addresses, Address Grid, Address Grid Ticks, Subdivision Name, Split Parcels, Consolidated Lots, Questionable Property cut, Buildings, Control Monuments, Churches, Cemeteries, Schools, Firehouses, Parkland, Nature Conservancy, Marine Clay

All property information is captured and maintained digitally. Property maps are updated daily and published in book format yearly. The reference collection of property books dates back to 1961. Current and historic property maps may be viewed at the GIS and Mapping Services office. The Property Map book is also available for sale in paper book form or digitally—see price list for details.

Source materials for property maps include site plans, deed descriptions, subdivision plats, and acreage plats. A plat is a detailed drawing taken from the survey of a property boundary. A few of the many features included on a plat are: Bearings and Distances of lot lines, Utility Easements, Area, and Curve Data. The collection is comprised of paper plats which vary in size, scale, number of pages, and condition.

Zoning Maps

All land in Fairfax County is zoned into residential, commercial, industrial or mixed use districts. The permitted density in each zoning district and the uses allowed within each district are described in detail in the County Zoning Ordinance. The location and boundaries of the zoning districts established by this Ordinance are illustrated on official zoning maps. These maps illustrate all of the property map information as well as the zoning districts.

Zoning maps include:
- **Property Map Layers:** *See the property map description for details on all included layers.*
- **Residential:** 5 acres - Agricultural, 10 Acres - Preservation, 5 Acres - Conservation, 2 Acres - Estate, 1 Acre - 1 DU/AC (Dwelling Unit per Acre), ½ acre - 2 DU/AC, 3 DU/AC, 4 DU/AC, 5 DU/AC, 8 DU/AC, 12 DU/AC, 16 DU/AC, 20 DU/AC, 30 DU/AC, Mobile Home Park
- **Commercial:** Low Rise Office, Limited Office, Office District, High Intensity Office, Neighborhood Retail, Community Retail, Highway, Super-regional Retail
- **Industrial:** Institutional, Light Ind. Research, Research, Light Intensity, Medium Intensity, General, Heavy
- **Planned Units:** Planned Development Housing, Planned Development Commercial, Planned Residential Community, Planned Residential Mixed-Use
- **Overlay Districts:** Airport Noise Impact, Highway Corridor, Historic, Natural Resource, Sign Control, Water Supply Protection, Commercial Revitalization
- **Other Categories:** Boundaries of Public & Semi-Public Lands, Planning Area Designation, Pending Zoning Cases

All zoning map information is maintained digitally. Zoning maps are updated daily and published in book format yearly. The reference collection of zoning books dates back to 1985. Current and historic zoning maps may be viewed at the GIS and Mapping Services office. The Zoning Map book is also available for sale in paper book form or digitally—see price list for details.
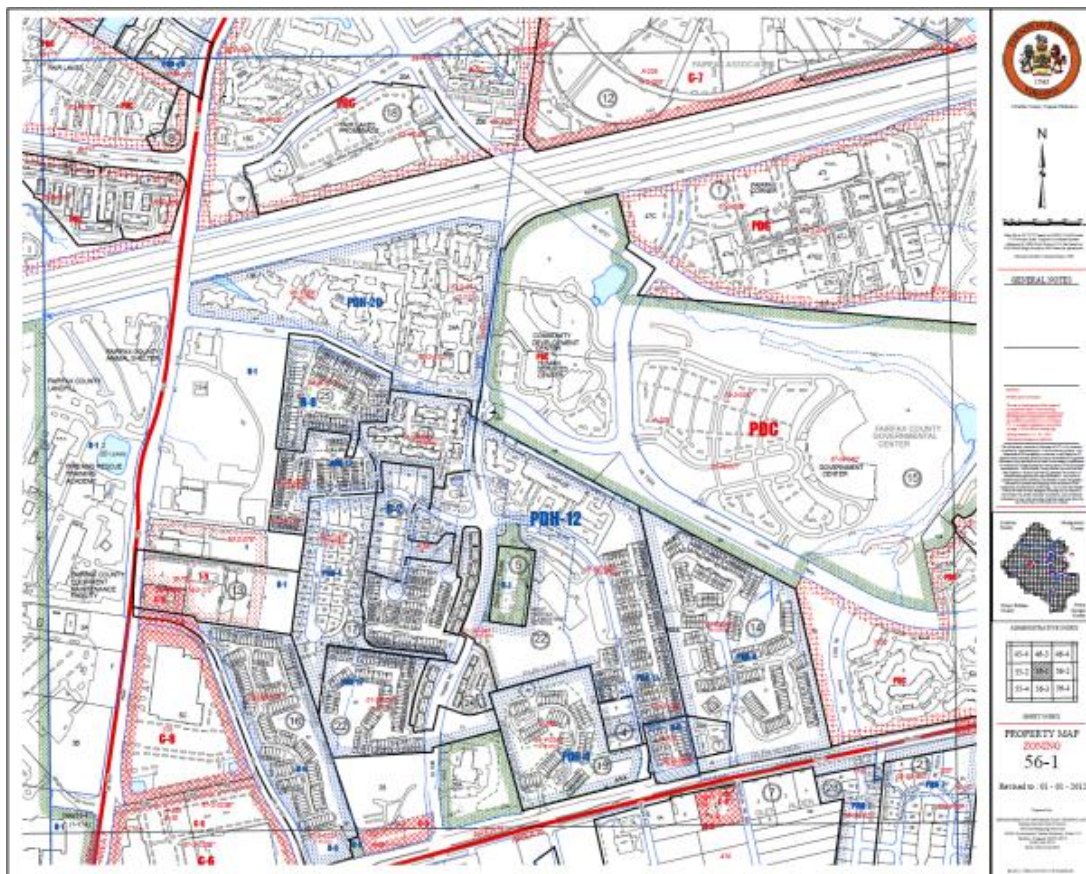
Topographic Maps

A topographic map illustrates ground surface elevation as well as natural and human-made features on the ground surface. This information was first derived from 1997 photography and is subsequently being updated from 2007 and 2009 photography. The contour interval for contours derived from 1997 photography is 5 feet. The contour interval for contours derived from 2007 or 2009 photography is 2 feet. These topographic maps do **not** show property map information. The topographic map data is not published in book format; however, all 444 grid sections have been compiled on in a PDF format. See price list for details.

Topographic maps include:
- **Transportation**: Paved roads, unpaved roads, bridges, sidewalks, railroads, parking lots, driveways
- **Structures:** Buildings, garages, swimming pools, decks, patios, water tanks, fuel tanks
- **Hydrography:** Lakes, ponds, rivers, streams, dams, paved ditches
- **Elevation:** Contours (2 foot or 5 foot), spot elevations
- **Recreation:** Tennis courts, basketball courts
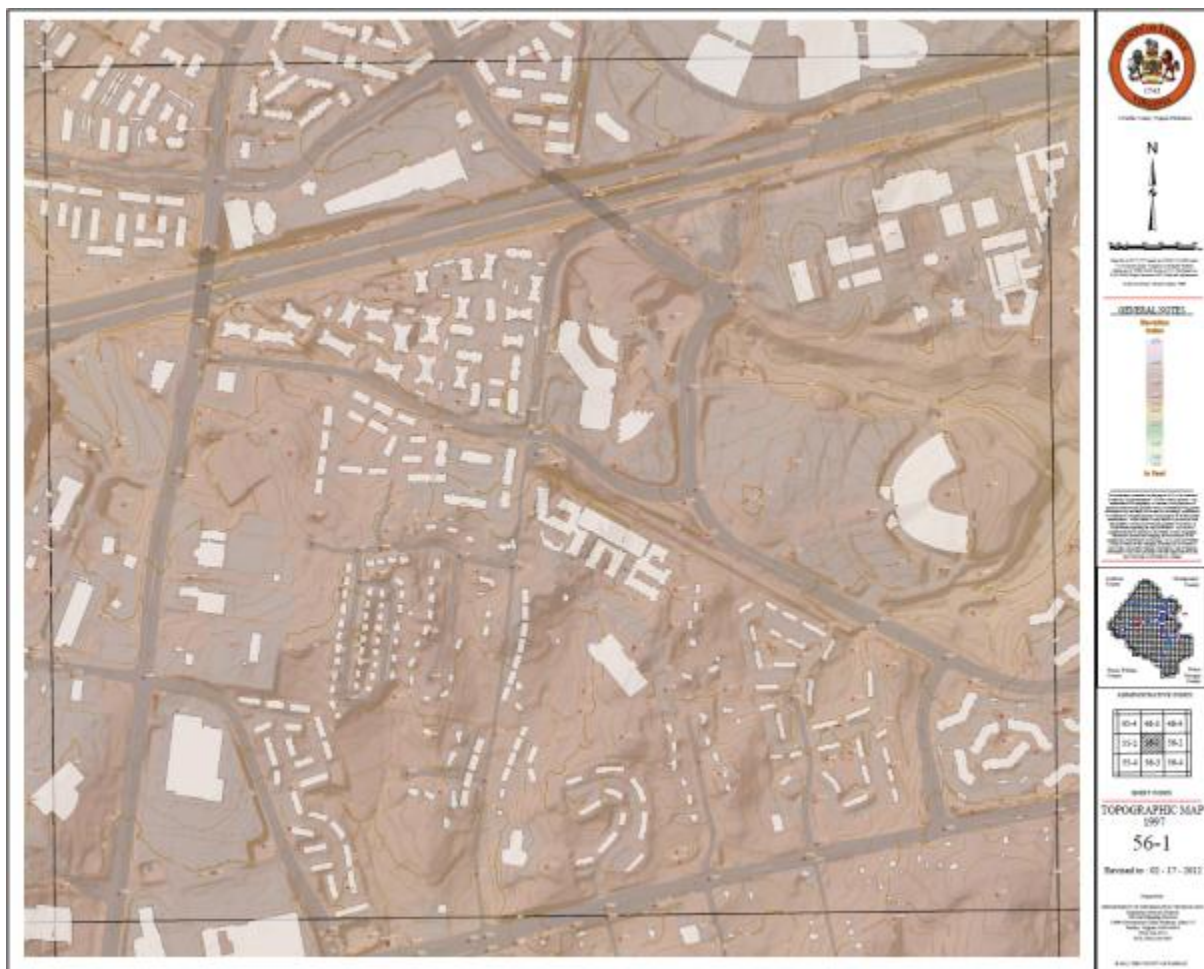
Contour Maps

A contour map illustrates ground surface elevation with lines that join points of equal elevation. These maps illustrate all of the property map information as well as contour lines. The contour interval is 5 feet. The date of the photography used to determine the ground elevation is 1997. Subsequently the county has been updating the contours from 2007 and 2009 photography in which the contour interval is 2 feet. The topographic map data is not published in book format; however, all 444 grid sections have been compiled on in a PDF format. See price list for details.

Contour maps include:

- **Property Map Layers:** *See the property map description for details on all included layers.*
- **Elevation:** Contours (2 foot or 5 foot), spot elevations

Chesapeake Bay Maps

This set of maps provides a delineation of Chesapeake Bay Preservation Areas (Resource Protection Areas and Resource Management areas) as set forth in Section 118-1-7 of Chapter 118 (Chesapeake Bay Preservation Ordinance) of the Code of the County of Fairfax, Virginia adopted by the Board of Supervisors on July 7, 2003 (effective November 18, 2003). Where RPA and RMA boundaries on the adopted map differ from boundaries as determined from the text of the Ordinance, the text shall govern. The Chesapeake Bay map data is not published in book format; however, all 444 grid sections have been compiled on in a PDF format. See price list for details.

Chesapeake Bay maps include:
- **Property Map Layers:** *See the property map description for details on all included layers.*
- **Resource Protection Areas:** 1993 RPAs, 2003 RPAs, Revised 2003 RPAs
- **Resource Management Areas**
- **Detailed RPA field delineations approved for sites**
- **Hydrography:** Water bodies with perennial flow, non-perennial water bodies, stormwater sewer system

Soils Maps – Official 2011

This set of maps provides delineation of differing soil types across the county. This map series was prepared by the United States Department of Agriculture-Natural Resources Conservation Service (NCRS). The soils information on these maps accounts for the drastic change in the landscape of Fairfax County since the 1963 soils survey. This also includes a previously unsurveyed 40,000 acres. This map was officially adopted by the Fairfax County Board of Supervisors in 2011.

Soils maps include:
- **Property Map Layers:** *See the property map description for details on all included layers*
- **Soils:** Soil type delineations, Marumsco Soils, Previously Mapped Marine Clay Soils, Non-Marine Clay High Shrink-Swell Soils, Potential Asbestos Containing Soils, Landfills, Quarrys

Soils Maps 1990

This set of maps provides delineation of differing soil types across the county that were based on updates that were made in 1990 to the soil survey published in May 1963 by the USDA Soils Conservation Service in cooperation with the Virginia Agricultural Experiment Station (Virginia Tech) and Fairfax County. All but about 40,000 acres of land remained unmapped at that time.

Soils maps include:
- **Property Map Layers:** *See the property map description for details on all included layers*
- **Soils:** Soil type delineations, Iredell Soils group, Naturally occurring Asbestos soils, Marine Clay deposits

Other Maps

There are other maps available on the Digital Map Viewer—currently Stormwater Infrastructure, Wastewater Infrastructure, and Stormwater FEMA-SFHA (flood zone maps). Descriptions for these map types will be posted soon.